

ABSTRACT OF THE DISCLOSURE

In a rewritable compact disc having a wobble groove on a substrate, crystal and amorphous states of a phase-change recording layer are an unrecorded/erased state and a recorded state, respectively. When the recording layer is exposed to recording light, amorphous marks assuming the recorded state are formed. At any of 2-, 4- and 8-times velocities with respect to a reference velocity (1-times velocity) whose linear velocity is 1.2-1.4 m/s, modulation m_{11} of a recorded signal when the recording light of approximately 780 nm in wavelength irradiates the recording layer via an optical system with NA=0.5 or 0.55 is 60-80%. A topmost level R_{top} of reflectivity of the eye pattern of the recorded signal during retrieving at the 1-times velocity is 15-25%, and a jitter of the individual length of marks and inter-mark spaces during retrieving at 1-times velocity is 35 ns or less. Recording at 8-times or higher velocities is thereby realized without any risk of impairing the read-compatibility with the conventional CD-RW specifications at least at 4-times velocity.